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LUC-300 / Dombkowski 7-4

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1 1. (Currently amended) A method comprising the steps of:

2 sending one or more upstream signals as pulse code modulated data without packet
3 headers using an upstream cable protocol, wherein at least one of the one or more upstream
4 signals is a video signal;

5 sending one or more downstream signals as pulse code modulated data without packet
6 headers using a downstream cable protocol; and

7 enclosing the one or more downstream signals as the pulse code modulated data without
8 application-level packet headers in a Motion Pictures Experts Group (MPEG) transport, ~~while~~
9 ~~limiting use of echo cancellation and jitter buffering.~~

1 2. (Previously presented) The method of claim 1, wherein the upstream protocol is Data-
2 Over-Cable System Interface Specification (DOCSIS).

1 3. (Original) The method of claim 1, wherein the step of sending one or more upstream
2 signals comprises mapping one or more pulse code modulated samples of the one or more
3 signals taken at a sampling interval to an allocation of mini-slots in the upstream protocol.

1 4. (Original) The method of claim 3, wherein the sampling interval is 125 microseconds
2 and the mini-slots occur at 6.25 microsecond intervals.

1 5. (Original) The method of claim 1, further comprising the step of multiplexing two or
2 more signals in one mini-slot in the upstream protocol.

1 6. (Previously presented) The method of claim 1, wherein the downstream protocol is
2 Data-Over-Cable System Interface Specification (DOCSIS).

1 7. (Original) The method of claim 1, wherein the step of sending one or more
2 downstream signals comprises mapping one or more pulse code modulated samples of the one or
3 more signals taken at a sampling interval to a Motion Pictures Experts Group (MPEG) transport
4 layer.

1 8. (Original) The method of claim 1, wherein the step of sending one or more
2 downstream signals comprises multiplexing multiple signals within a single Motion Pictures
3 Experts Group (MPEG) packet identifier.

1 9. (Original) The method of claim 1, wherein the method is performed in a cable system
2 having a media terminal adapter (MTA), such that subscriber signalling functionality is reduced
3 in the MTA.

1 10. (Original) The method of claim 1, wherein the method reduces throughput delay and
2 jitter for signals, thereby improving signal quality over existing transport methods.

1 11. (Currently amended) The method of claim 1, wherein the at least one of the one or
2 more upstream signals and the one or more downstream signals is a voice signal.

1 12. (Original) The method of claim 1, wherein at least one of the one or more upstream
2 signals and the one or more downstream signals is a video signal.

1 13. – 20. (Canceled)

1 21. (Currently amended) A method comprising the steps of:

2 providing one or more signals at a sampling interval, yielding pulse code modulated
3 (PCM) data;

4 transporting downstream signals as the PCM data without packet headers over a cable
5 media using a downstream cable protocol, wherein at least one of the downstream signals is a
6 video signal; and

7 enclosing the downstream signals as the pulse code modulated data without application-
8 level packet headers in a Motion Pictures Experts Group (MPEG) transport, ~~while limiting use of~~
9 ~~echo cancellation and jitter buffering.~~

1 22. (Previously presented) The method of claim 21, wherein the downstream protocol is
2 Data-Over-Cable System Interface Specification (DOCSIS).

1 23. (Original) The method of claim 21, wherein the step of providing the one or more
2 signals comprises mapping each byte of pulse code modulated data to a Motion Pictures Experts
3 Group (MPEG) transport layer.

1 24. (Original) The method of claim 21, wherein the step of providing the one or more
2 signals comprises multiplexing multiple signals within a single Motion Pictures Experts Group
3 (MPEG) packet identifier.

1 25. (Original) The method of claim 21, wherein the method reduces throughput delay and
2 jitter for signals, thereby improving signal quality over existing transport methods.

1 26. (Original) The method of claim 21, wherein at least one of the one or more signals is
2 a voice signal.

1 27. (Original) The method of claim 21, wherein at least one of the one or more signals is
2 a video signal.

1 28. (Currently amended) An apparatus comprising:
2 a sampler, arranged and constructed to sample one or more signals at a sampling interval,
3 yielding pulse code modulated (PCM) data; and
4 a transport device, arranged and constructed to transport the PCM data without packet
5 headers over a cable media using an upstream cable protocol;
6 wherein the transport device transports downstream signals enclosed as the pulse code
7 modulated data without application-level packet headers in a Motion Pictures Experts Group
8 (MPEG) transport, and wherein at least one of the downstream signals is a video signal while
9 ~~limiting use of echo cancellation and jitter buffering.~~

1 29. (Previously presented) The apparatus of claim 28, wherein the upstream protocol is
2 Data-Over-Cable System Interface Specification (DOCSIS).

1 30. (Original) The apparatus of claim 28, wherein the step of sampling the one or more
2 signals comprises mapping each byte of pulse code modulated data to one of a plurality of mini-
3 slots in the upstream protocol.

1 31. (Original) The apparatus of claim 30, wherein the sampling interval is 125
2 microseconds and each of the plurality of mini-slots occurs at 6.25 microsecond intervals.

1 32. (Original) The apparatus of claim 28, further comprising a multiplexor for
2 multiplexing two or more signals in one mini-slot in the upstream protocol.

1 33. (Original) The apparatus of claim 28, wherein the apparatus reduces throughput delay
2 and jitter for signals, thereby improving signal quality over existing transport methods.

1 34. (Original) The apparatus of claim 28, wherein at least one of the one or more signals
2 is a voice signal.

1 35. (Currently amended) The apparatus of claim 28, wherein at least one of the one or
2 more signals is [[a]] the video signal.

1 36. (Original) The apparatus of claim 28, wherein the apparatus is part of a media
2 terminal adapter.

1 37. (Canceled)

1 38. (Currently amended) The method of claim 1, wherein the step of sending one or more
2 upstream signals further comprises the step of sending the one or more upstream signals as pulse
3 code modulated data in a form that allows transfer to Public Switched Telephone Network
4 (PSTN) without transcoding the pulse code modulated data of the one or more upstream signals.